

Our new release...

Here are some of the things that have been added in the Giovanni 3.0.6.2 release.

New instances:

TRMM 3-Hourly, http://gdata1.sci.gsfc.nasa.gov/daac-bin/G3/gui.cgi?instance_id=TRMM_3-Hourly

NEESPI Daily, http://gdata1.sci.gsfc.nasa.gov/daac-bin/G3/gui.cgi?instance_id=neespi_daily

Other items:

- The KMZ/WMS mapping service has been extended to handle new image types.
- New ECMWF and MLS parameters in A-Train for Curtain Plot, and new OMI parameters for Strip Plot
- NEESPI has been extended with MODIS-Aqua and AIRS parameters.
- TRMM now has the capability to use Comparison Plot for the same data product at different resolutions.
- OMI has new aerosol and ozone Level 3 parameters. SO₂ and aerosol have been added to OMIL2G, which has better data handling efficiency and an improved user experience via data caching and performance enhancements.

Giovanni Release 3.0.6.2 is currently operational.

Hurricane season in the Atlantic

The Mayan storm god at the ancient city of Copan.

(Photograph courtesy of Jill and Ian Maxted.)



Late August and September in most years can be an anxious time for residents of the East Coast and Gulf of Mexico coastal regions of the United States, as well as islands in the Caribbean and the eastern shores of Mexico. This is the time when manifestations of Huracán, the Mayan god of storm, wreak havoc and destruction. This season is also prime-time for Giovanni, which provides near-real-time images of hurricane- and tropical storm-related precipitation with Tropical Rainfall Measuring Mission data. Not all such precipitation is a bad thing; the soaking rains of Fay, which are delivering showers to Maryland as I write this, delivered much much-needed rainfall to drought-affected areas in the U.S. Southeast.

Email jim.acker@nasa.gov with your comments on this issue of the Giovanni News.

Giovanni assists with investigation of aerosols over India and adjacent oceans

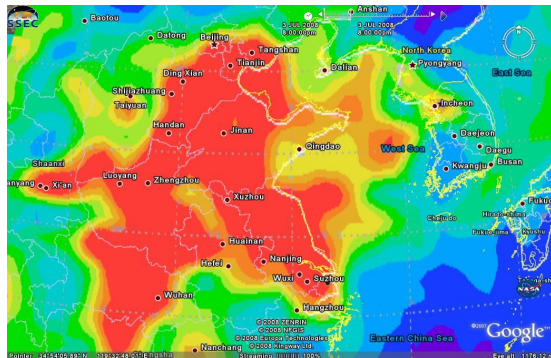
Scientists from the Physical Research Laboratory in Ahmedabad, India utilized Giovanni to research aerosols over the Indian subcontinent, the Arabian Sea, and the Bay of Bengal. Giovanni data output of MODIS Terra and Aqua aerosol optical depth (AOD) and fine mode fraction were compared to ship-based AODs ascertained by Sun photometer, and airborne nephelometer data. For the Indian subcontinent, air masses originate from both marine and arid desert sources, creating a variety of aerosol characteristics. Scattering AOD from 0-3000 meters altitude accounts for 18-36% of the total column AOD. Over the ocean, anthropogenic sources contribute a greater percentage, and marine aerosols (sea salt) a lesser percentage to the total AOD than for other oceanic regions. The researchers observed a larger anthropogenic influence over the Bay of Bengal than over the Arabian Sea.

S. Kedia and S. Ramachandran, *Features of aerosol optical depths over the Bay of Bengal and the Arabian Sea during premonsoon season: Variabilities and anthropogenic influence*. JGR **113**, D11201, doi:10.1029/2007JD009070, 2008.

S. Ramachandran and T.A. Rajesh, *Asymmetry parameters in the lower troposphere derived from aircraft measurements of aerosol scattering coefficients over tropical India*, JGR **113**, D16212, doi:10.1029/2008JD009795, 2008.

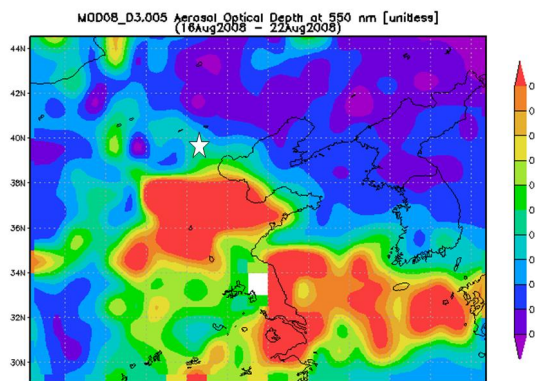
Air Quality at the Beijing Olympics

Numerous articles about the 2008 Olympic Games expressed the concerns of athletes and team officials regarding the potential poor and unhealthy air quality conditions which might affect the Olympic venues. At the University of Maryland Baltimore County's "Smog Blog" (<http://alg.umbc.edu/usaq/>), output from Giovanni is used to examine air quality in the United States and around the world. For the month prior to the Games, Ana Prados of the GES DISC and UMBC posted this image of MODIS Terra Aerosol Optical Depth using a Giovanni KMZ output file in Google Earth:



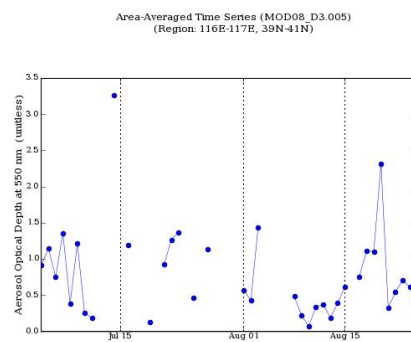
Looking at this image, one would think that conditions did not bode well for the Games, and indeed the reports from the athletes and media, as well as images of the haze, confirmed the concern. However: emissions restrictions, wind, rain, and general weather combined to provide relatively good air quality conditions throughout most of the competitions.

The lower image was generated with the Giovanni MODIS daily instance, showing AOD from August 16-22. The white star is the approximate location of Beijing.



The Smog Blog has a summary post for the Olympics at the following URL, which includes the MODIS AOD time-series shown below.

<http://alg.umbc.edu/usaq/archives/002923.html>



Citizen Science Guide Workshop

On August 12 and 13 (blessedly cool by the normal standards of August in Washington D.C.) a group composed of scientists, educators, data specialists, Web education innovators, and Web graphic designers met to formulate chapters for the prototype "Citizen Scientist's Guide to Earth Observations from Space". The guide will utilize the analytical capabilities of Giovanni and NEO, combined with detailed descriptions of methods to perform environmental measurements of the local ground, air, and water. Three teams worked on the initial chapters of the guide, which will be on topics related to water quality, air quality, and precipitation. The chapter content will be developed for publication on the Web during September-December 2008. The goal of the Citizen Scientist's Guide is create interest and cooperative partnerships among interested members of the public in the Earth remote sensing data provided by NASA satellites, and to increase understanding of how this data relates to conditions in their local environment.

